FORM PTO-1595 **'J.S. DEPARTMENT OF COMMERCE** RECORDATION FORM COVER SHEET 1-31-92 Patent and Trademark Office **PATENTS ONLY** Attorney Docket No. <u>10007</u>763-1 1. Name of conveying party(ies): 2. Name and address of receiving party(ies): Zhizhang Chen **HEWLETT-PACKARD COMPANY Intellectual Property Administration** Michael David Bice P.O. Box 272400 Ronald L. Enck Fort Collins, Colorado 80527-2400 Michael J. Regan **Thomas Novet** Paul J. Benning Additional name(s) of conveying party(ies) attached Yes X No Additional name(s) & address(es) attached? ___Yes_X No 3. Nature of Conveyance: X Assignment Merger Change of Name Security Agreement Other Execution Date(s): 8/03/01; 08/16/01; 08/02/01; 08/16/01; 08/16/01; 08/06/01 Application number(s) or patent number(s): If this document is being filed together with a new application, execution date of the application is: A. Patent Application No.(s) B. Patent No.(s) Application No.: 09/846,047 Date Filed: 04/30/2001 Confirmation No.: 4496 Additional numbers attached? NO 5. Name and address of party to whom correspondence 6. Total number of applications and patents involved: 1 concerning document should be mailed: 7. Total Fee (37 CFR 3.41): \$40.00 Records Manager **HEWLETT-PACKARD COMPANY** Enclosed 1000 Circle Blvd. MS 422B X Authorization to be charged to deposit account. Corvallis, OR 97330 8. Deposit Account Number: 08-2025 DO NOT USE THIS SPACE 9. Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Jan 30, 2002 Teresa K. Tuma Name of Person Signing Total number of pages including cover sheet, attachments, and document: 4 OMB No. 0651-0011 (exp. 4/94)

Commissioner for Patents
Box Assignment
Washington, D.C. 20231

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ATTORNEY DOCKET NO. 10007763-1

HEWLETT-PACKARD COMPANY Intellectual Property Administration P. O. Box 272400 Fort Collins, Colorado 80527-2400

TION COPY

ASSIGNMENT OF PATENT APPLICATION

I/We, the undersigned (each) have agreed and hereby agree to assign to HEWLETT-PACKARD COMPANY, a Delaware corporation having its principal place of business in Palo Alto, California, (hereinafter HP), in furtherance of my/our obligations to HP, and do hereby assign and transfer to HP, its successors and assigns, the entire right, title and interest, including the right of priority, in, to and under an application for Letters Patent of the United States entitled:

Silicon-Based Dielectric Tunneling Emitter	
Filing date: 04/30/2001	Application No.: 09/846,047
continuations-in-part (C-I-P's), divisionals, and rend Letters Patent, and any and all Letters Patent of	forth therein, and any and all continuations, ewals of and substitutes for said application for said the United States and of countries foreign thereto y reissues, or reexaminations, or extensions of said
to be held and enjoyed by HP, its successors, assign of the term or terms for which said Letters Patent	ins in my/our name for Letters Patent in any country, gns, nominees or legal representatives, to the full end t respectively may be granted, reissued or extended, held and enjoyed by me/us had this assignment, and
and that I/we have not executed and will not ex further covenant and agree that I/we will, each execute and deliver all such papers as may be invention(s) or improvement(s), said application an nominees or legal representatives, and I/we agree facts respecting said invention(s) or improvement(s in any legal proceedings, to sign all lawful p continuations, C-I-P's, reissue and foreign applicat generally to do everything possible to aid H representatives to obtain and enforce, for its or	Il right to convey the entire interest herein assigned, recute any agreement in conflict herewith, and I/we time a request is made, and without undue delay, necessary or desirable to perfect the title to said d said Letters Patent, to HP, its successors, assigns, to communicate to HP, or to its nominee, all knowns), said application and said Letters Patent, to testify apers, to execute all disclaimers and divisionals, ions, to make all rightful oaths and declarations, and IP, its successors, assigns, nominees and legal their own benefit, proper patent protection for said ries provided the expenses which may be incurred by are paid by HP;
patents on applications as aforesaid, to issue to hany and all Letters Patent for said invention(s) or in	emmissioner of Patents and Trademarks of the United foreign to the United States whose duty it is to issue HP, as assignee of the entire right, title and interest, inprovement(s), including any and all Letters Patent of ted on or as a result of the application aforesaid, in
I/we further authorize and direct HP attorney application now identified by the attorney docket r shall have been made known to them by the United	vs to insert the serial number and filing date of said number and title set forth above as soon as the same d States Patent and Trademark Office.
IN WITNESS WHEREOF, I/we hereunto set my	/our hand(s) and seal(s): e Assignment Signed:
Inventor's Typed Name: Zhizhang Chen	Date Application Signed: 8/5/0/
State of Oregon) County of Benton) ss.:	•
Before me this 3 day of Quicupt 2001 person	nally appeared Zhizhang Chen who tory evidence to be the person who acknowledged the foregoing

Rev 06/01 (Assign)

OFFICIAL SEAL
TERESA K TUMA
NOTARY PUBLIC - OREGON
COMMISSION NO. 336747
MY COMMISSION EXPIRES SEPT. 8, 2004

Notary Public
My commission expires:

PATENT APPLICATION

HEWLETT-PACKARD COMPANY Intellectual Property Administration P. O. Box 272400

Fort Collins, Colorado 80527-2400

ATTORNEY DOCKET NO. 10007763-1



ASSIGNMENT OF PATENT APPLICATION (cont.)

IN WITNESS WHEREOF, I we hereunto set my/our hand(s) and seal(s): Date Assignment Signed: 8/16/01 Inventor's Signature (Seal) Inventor's Typed Name: Michael David Bice State of Oregon) ss.: County of Benton Before me this 16 day of Aug 2001 , personally appeared Michael David Bice who is personally known or proved to me on the basis of satisfactory evidence to be the person who acknowledged the foregoing instrument of assignment to be his/her free act and deed. OFFICIAL SEAL TRISHA M MELCHER NOTARY PUBLIC - OREGON COMMISSION NO. 338842 MY COMMISSION EXPIRES SEPT. 28, 2884 Date Assignment Signed: Inventor's Signature (Seal) Inventor's Typed Name: Ronald L. Enck Date Application Signed: State of Oregon)) ss.: County of Benton Before me this and day of August 2001, personally appeared Ronald L. Enck who is personally known or proved to me on the basis of satisfactory evidence to be the person who acknowledged the foregoing instrument of assignment to be his/her free act and deed. OFFICIAL SEAL TERESA K TUMA NOTARY PUBLIC - OREGON COMMISSION NO. 336747 Date Application Signed: 8/16/91 Inventor's Typed Name: Michael J. Regan State of Oregon) ss.: Before me this 16 day of Aug. 2001 , personally appeared Michael J. Regan who is personally known or proved to me on the basis of satisfactory evidence to be the person who acknowledged the foregoing instrument of assignment to be his/her free act and deed. Justic M. Molcher

Notary Public
My commission expires: Jept. 26, 2004 OFFICIAL SEAL TRISHA M MELCHER NOTARY PUBLIC - OREGON COMMISSION NO. 338842

MY COMMISSION EXPIRES SEPT. 28, 2004

PATENT APPLICATION

HEWLETT-PACKARD COMPANY Intellectual Property Administration P. O. Box 272400

Fort Collins, Colorado 80527-2400

ATTORNEY DOCKET NO. 10007763-1



ASSIGNMENT OF PATENT APPLICATION (cont.)

IN WITNESS WHEREOF, I we hereunto set my/our hand(s) and seal(s):		
Inventor's Signature (Seal)	te Assignment Signed: 8 16 01	
Inventor's Typed Name: Thomas Novet	Date Application Signed: 8 16 01	
State of Oregon)	•	
County of Benton) ss.:		
Before me this 10 day of 19. 2001, perpersonally known or proved to me on the basis of satisfact instrument of assignment to be his/her free act and deed. OFFICIALS TRISHA M MI NOTARY PUBLIC COMMISSION N MY COMMISSION EXPIRES	ELCHER OREGON O. 338842 My commission expires: 347. 260, 260	
Day	te Assignment Signed: 6-Aug - 0/	
inventor a dignature (deal)	•	
Inventor's Typed Name: Paul J. Benning	Date Application Signed: 6-Aug-01	
State of Oregon)	•	
County of Benton) ss.:		
Before me this 6th day of aug. 2001, pers	conally appeared Paul J. Benning who is ory evidence to be the person who acknowledged the foregoing	
personally known or proved to me on the basis of satisfact instrument of assignment to be his/her free act and deed.	ory evidence to be the person who acknowledged the foregoing	
OFFICIAL SEAL TERESA K TUMA	Geresa K. Juna	
NOTARY PUBLIC - OREGON COMMISSION NO. 336747 MY COMMISSION EXPIRES SEPT. 8, 2004	My commission expires: 9-8-2004	
Inventor's Signature (Seal)	e Assignment Signed:	
Inventor's Typed Name:	Date Application Signed:	
State of)		
) ss.:		
Before me this day of, pers	conally appeared who is	
personally known or proved to me on the basis of satisfact instrument of assignment to be his/her free act and deed.	ory evidence to be the person who acknowledged the foregoing	
	Notary Public My commission expires:	